

<110> Jialing, Sun

<120> A superantigen fusion protein for anti-cancer therapy and methods for the production thereof

<130> 042601

<150> CN 200310109829.7

<151> 2003-12-21

<160> 4

<170> PatentIn version 3.1

<210> 1

<211> 903

<212> DNA

<213> artificial sequence

<220>

<221> misc_feature

<222> (1)..(903)

<223> coding sequence of fusion protein

<400> 1

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cgctgtcagt atcgagatct gaaatgggtg gaacttagag gtggaggcgg ttcaggcgga      180
gggtggctctg gcgggtggcgg atcgagcgag aaaagcgaag aaataaatga aaaagatttg      240
cgaaaaaagt ctgaattgca gggaacagct ttaggcaatc ttaaacaat ctattattac      300
aatgaaaaag ctaaaactga aaataaagag agtcacgac aattttttaca gcatactata      360
ttgttttaaag gcttttttac agatcattcg tgggtataacg atttattagt agattttgat      420
tcaaaggata ttgttgataa atataaaggg aaaaaagtag acttgtagtg tgcttattat      480
ggttatcaat gtgcgggtgg tacaccaaac aaaacagctt gtatgtatgg tgggtgaacg      540
ttacatgata ataatcgatt gaccgaagag aaaaaagtc cgatcaattt atggctagac      600
ggtaaacaaa atacagtacc ttggaacacg gttaaaacga ataagaaaa tgtaactgtt      660
caggagttgg atcttcaagc aagacgttat ttacaggaaa aatataattt atataactct      720
gatgtttttg atgggaaggt tcagagggga ttaatcgtgt ttacatactt tacagaacct      780
tcggttaatt acgatttatt tgggtgctcaa ggacagtatt caaatacact attaagaata      840
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agt                                                                903

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<210> 2

<211> 301

<212> PRT

<213> artificial sequence

<220>

<221> misc_feature

<222> (1)..(301)

<223> fusion protein

<400> 2

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20 25 30
Cys Val Val Gly Tyr Ile Gly Glu Arg Cys Gln Tyr Arg Asp Leu Lys
35 40 45
Trp Trp Glu Leu Arg Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
50 55 60
Gly Gly Gly Ser Ser Glu Lys Ser Glu Glu Ile Asn Glu Lys Asp Leu
65 70 75 80
Arg Lys Lys Ser Glu Leu Gln Gly Thr Ala Leu Gly Asn Leu Lys Gln
85 90 95
Ile Tyr Tyr Tyr Asn Glu Lys Ala Lys Thr Glu Asn Lys Glu Ser His
100 105 110
Asp Gln Phe Leu Gln His Thr Ile Leu Phe Lys Gly Phe Phe Thr Asp
115 120 125
His Ser Trp Tyr Asn Asp Leu Leu Val Asp Phe Asp Ser Lys Asp Ile
130 135 140
Val Asp Lys Tyr Lys Gly Lys Lys Val Asp Leu Tyr Gly Ala Tyr Tyr
145 150 155 160
Gly Tyr Gln Cys Ala Gly Gly Thr Pro Asn Lys Thr Ala Cys Met Tyr
165 170 175
Gly Gly Val Thr Leu His Asp Asn Asn Arg Leu Thr Glu Glu Lys Lys
180 185 190
Val Pro Ile Asn Leu Trp Leu Asp Gly Lys Gln Asn Thr Val Pro Leu
195 200 205
Glu Thr Val Lys Thr Asn Lys Lys Asn Val Thr Val Gln Glu Leu Asp
210 215 220
Leu Gln Ala Arg Arg Tyr Leu Gln Glu Lys Tyr Asn Leu Tyr Asn Ser
225 230 235 240
Asp Val Phe Asp Gly Lys Val Gln Arg Gly Leu Ile Val Phe His Thr
245 250 255
Ser Thr Glu Pro Ser Val Asn Tyr Asp Leu Phe Gly Ala Gln Gly Gln
260 265 270
Tyr Ser Asn Thr Leu Leu Arg Ile Tyr Arg Asp Asn Lys Thr Ile Asn
275 280 285
Ser Glu Asn Met His Ile Asp Ile Tyr Leu Tyr Thr Ser
290 295 300

<210> 3

<211> 1107

<212> DNA

<213> artificial sequence

<220>

<221> misc_feature

<222> (1)..(1107)

<223> coding sequence of fusion protein

<400> 3

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gatgagatcg agtacatctt caagccatcc tgtgtgcccc tgatgcgatg cgggggctgc 180
tgcaatgacg agggcctgga gtgtgtgccc actgaggagt ccaacatcac catgcagatt 240
atgcggatca aacctacca aggccagcac ataggagaga tgagcttcct acagcacaac 300
aaatgtgaat gcagaccaa gaaagataga gcaagacaag aaaaatgtga caagccgagg 360
cgggggtggag gcggttcagg cggaggtggc tctggcgggt gcggatcgag cgagaaaagc 420
gaagaaataa atgaaaaaga tttgcgaaaa aagtctgaat tgcagggaac agcttttaggc 480
aatcttaaac aaatctatta ttacaatgaa aaagctaaaa ctgaaaataa agagagtcac 540
gatcaatttt tacagcatac tatattgttt aaaggctttt ttacagatca ttcgtggtat 600
aacgatttat tagtagattt tgattcaaag gatattgttg ataaatataa agggaaaaaa 660
gtagacttgt atggtgctta ttatggttat caatgtcggg gtggtacacc aaacaaaaca 720
gcttgtatgt atggtggtgt aacgttacat gataataatc gattgaccga agagaaaaaa 780
gtgccgatca atttatggct agacggtaaa caaatacag tacctttgga aacggttaaa 840
acgaataaga aaaatgtaac tgttcaggag ttggatcttc aagcaagacg ttatttacag 900
gaaaaatata atttatataa ctctgatgtt tttgatggga aggttcagag gggattaatc 960
gtgtttcata cttctacaga accttcggtt aattacgatt tatttggtgc tcaaggacag 1020
tattcaaata cactattaag aatatataga gataataaaa cgattaactc tgaaaacatg 1080
catattgata tatatttata tacaagt 1107
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<210> 4

<211> 369

<212> PRT

<213> artificial sequence

<220>

<221> misc_feature

<222> (1)..(369)

<223> fusion protein

<400> 4

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Phe Met Asp Val Tyr Gln Arg Ser Tyr Cys His Pro Ile Glu Thr Leu
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Val Asp Ile Phe Gln Glu Tyr Pro Asp Glu Ile Glu Tyr Ile Phe Lys
          35          40          45
Pro Ser Cys Val Pro Leu Met Arg Cys Gly Gly Cys Cys Asn Asp Glu
          50          55          60
Gly Leu Glu Cys Val Pro Thr Glu Glu Ser Asn Ile Thr Met Gln Ile
65          70          75          80
Met Arg Ile Lys Pro His Gln Gly Gln His Ile Gly Glu Met Ser Phe
          85          90          95
Leu Gln His Asn Lys Cys Glu Cys Arg Pro Lys Lys Asp Arg Ala Arg
          100         105         110
Gln Glu Lys Cys Asp Lys Pro Arg Arg Gly Gly Gly Gly Ser Gly Gly
          115         120         125
Gly Gly Ser Gly Gly Gly Gly Ser Ser Glu Lys Ser Glu Glu Ile Asn
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130	135	140
Glu Lys Asp Leu Arg Lys Lys Ser Glu Leu Gln Gly Thr Ala Leu Gly		
145	150	155
Asn Leu Lys Gln Ile Tyr Tyr Tyr Asn Glu Lys Ala Lys Thr Glu Asn		160
	165	170
Lys Glu Ser His Asp Gln Phe Leu Gln His Thr Ile Leu Phe Lys Gly		175
	180	185
Phe Phe Thr Asp His Ser Trp Tyr Asn Asp Leu Leu Val Asp Phe Asp		190
	195	200
Ser Lys Asp Ile Val Asp Lys Tyr Lys Gly Lys Lys Val Asp Leu Tyr		205
	210	215
Gly Ala Tyr Tyr Gly Tyr Gln Cys Ala Gly Gly Thr Pro Asn Lys Thr		220
225	230	235
Ala Cys Met Tyr Gly Gly Val Thr Leu His Asp Asn Asn Arg Leu Thr		240
	245	250
Glu Glu Lys Lys Val Pro Ile Asn Leu Trp Leu Asp Gly Lys Gln Asn		255
	260	265
Thr Val Pro Leu Glu Thr Val Lys Thr Asn Lys Lys Asn Val Thr Val		270
	275	280
Gln Glu Leu Asp Leu Gln Ala Arg Arg Tyr Leu Gln Glu Lys Tyr Asn		285
	290	295
Leu Tyr Asn Ser Asp Val Phe Asp Gly Lys Val Gln Arg Gly Leu Ile		300
305	310	315
Val Phe His Thr Ser Thr Glu Pro Ser Val Asn Tyr Asp Leu Phe Gly		320
	325	330
Ala Gln Gly Gln Tyr Ser Asn Thr Leu Leu Arg Ile Tyr Arg Asp Asn		335
	340	345
Lys Thr Ile Asn Ser Glu Asn Met His Ile Asp Ile Tyr Leu Tyr Thr		350
	355	360
		365

Ser

<210> 5
 <211> 45
 <212> DNA
 <213> artificial sequence

<220>
 <221> misc_feature
 <222> (1)..(45)
 <223> primer

<400> 5
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45

<210> 6
 <211> 15
 <212> PRT
 <213> artificial sequence

<220>

<221> misc_feature
<222> (1)..(15)
<223> linker peptide

<400> 6

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1 5 10 15

<210> 7
<211> 34
<212> DNA
<213> artificial sequence

<220>
<221> misc_feature
<222> (1)..(34)
<223> primer

<400> 7
gagcccgggc agcgagaaaa gcgaagaaat aaat

34

<210> 8
<211> 40
<212> DNA
<213> artificial sequence

<220>
<221> misc_feature
<222> (1)..(40)
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<400> 8
gtgcggccgc acttgatat aaatatatat caatatgcat

40

<210> 9
<211> 28
<212> DNA
<213> artificial sequence

<220>
<221> misc_feature
<222> (1)..(28)
<223> primer

<400> 9
gagcccgggc aattccgata gcgagtgt

28

<210> 10
<211> 28
<212> DNA

<213> artificial sequence

 <220>
 <221> misc_feature
 <222> (1)..(28)
 <223> primer

 <400> 10
 gtgcggccgc tctaagttcc caccattt 28

 <210> 11
 <211> 31
 <212> DNA
 <213> artificial sequence

 <220>
 <221> misc_feature
 <222> (1)..(31)
 <223> primer

 <400> 11
 gagcccgggc gcacccatgg cagaaggagg a 31

 <210> 12
 <211> 55
 <212> DNA
 <213> artificial sequence

 <220>
 <221> misc_feature
 <222> (1)..(55)
 <223> primer

 <400> 12
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 <210> 13
 <211> 54
 <212> DNA
 <213> artificial sequence

 <220>
 <221> misc_feature
 <222> (1)..(54)
 <223> primer

 <400> 13
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 <210> 14
 <211> 60

<212> DNA

<213> artificial sequence

<220>

<221> misc_feature

<222> (1)..(60)

<223> primer

<400> 14

tcaggcggag gtggctctgg cggtaggcgga tcgagcgaga aaagcgaaga aataaatgaa 60

<210> 15

<211> 57

<212> DNA

<213> artificial sequence

<220>

<221> misc_feature

<222> (1)..(57)

<223> primer

<400> 15

gccagagcca cctccgcctg aaccgcctcc accccgcctc ggcttgtcac atttttc 57